

REMARKS

Claims 1-23 are currently pending in the application.

Claims 6-16 and 21-23 are allowed.

Claims 1-3, 5 and 17-20 are rejected under 35 U.S.C. 102(e).

Claim 4 is rejected under 35 U.S.C. 103(a).

No new matter is added.

Claims 1-5 and 17-20 remain in the case for consideration.

Applicant requests reconsideration and allowance of the claims in light of the above amendments and following remarks.

Claim Rejections - 35 U.S.C. § 102

Claims 1-3, 5 and 17-20 are rejected under 35 U.S.C. 102(e) as being allegedly anticipated by U.S. Patent Application Publication No. 2004/0038478 to Tang. Applicants respectfully traverse this rejection.

Claim 1 recites, among other elements, “forming a first insulating film ... having a first contact pad and a second contact pad; forming a second insulating film on the first insulating film; etching the second insulating film to form a contact and a groove-shaped bit line pattern exposing the first contact pad and the second contact pad, respectively; [and] ... forming a contact plug and a bit line in the contact and in the bit line pattern, respectively, wherein the contact plug and the bit line are formed above the first contact pad and the second contact pad, respectively....” Applicants respectfully submit that Tang fails to teach at least these elements as recited in claim 1.

For example, Tang shows forming a dielectric layer 120 (see Tang, FIGS. 9A and 9B, paragraph [0047]), forming bit line contact openings 122 and cell plug openings 124 in the dielectric layer 120 (see Tang, FIGS. 10A and 10B, paragraph [0048]), forming bit line contacts 132 in the bit line contact openings 122 and forming cell plugs 134 in the cell plug openings 124 (see Tang, FIGS. 11A and 11B, paragraph [0049]), forming elongated trenches 136 within upper sections of the bit line contacts 132 and portions of the dielectric layer 120 between the bit line contacts 132 (see Tang, FIGS. 12A and 12B, paragraph [0051]), and forming a plurality of bit lines 152 within the elongated trenches 136, wherein upper surfaces of the bit lines 152 appear to

be substantially coplanar with upper surfaces of the dielectric layer 120, the bit line contacts 132 and cell plugs 134 (see Tang, FIGS. 14A-15C, paragraphs [0053]-[0057]).

In view of the above, it is clear that Tang shows wherein the bit line contacts 132, the cell plugs 134, and the bit lines 152 are formed within the dielectric layer 120. Because the bit line contacts 132, the cell plugs 134, and the bit lines 152 are all formed within the dielectric layer 120, Applicants respectfully submit that Tang cannot teach “forming a second insulating film on the first insulating film; [and] etching the second insulating film to form a contact and a groove-shaped bit line pattern” as recited in claim 1.

In view of the above, it is also clear that, aside from the bottom cell plate 180 (see Tang, FIG. 18), Tang simply shows the formation of bit line contacts 132, cell plugs 134, and bit lines 152. As such, Tang cannot teach forming the first contact pad, the second contact pad, the contact plug above first contact pad, and the bit line above the second contact pad, as each recited in claim 1.

For at least the reasons stated above, Applicants respectfully submit that Tang does not anticipate claim 1 and, therefore, request allowance of this claim. Additionally, Applicants request allowance of claims 2, 3 and 5 at least based upon their dependence from claim 1.

Further, while claims 2 and 3 were identified as being allegedly anticipated by Tang, the Office Action fails to identify where Tang teaches the subject matter of claims 2 and 3. Nevertheless, Applicants respectfully submit that Tang is silent as to the subject matter recited in claims 2 and 3. For at least these additional reasons, Applicants submit that Tang fails to anticipate claims 2 and 3 and requests allowance of these claims.

Claim 17 recites, among other elements, “a first insulating film having a bit line contact pad and a storage node contact pad; [and] a second insulating film including a groove-shaped bit line pattern that exposes the bit line contact pad and a storage node contact that exposes the storage node contact pad ... ; [and] a bit line formed in the bit line pattern and above the bit line contact pad.” Applicants respectfully submit that Tang fails to teach at least these elements as recited in claim 17.

For example, as mentioned above, it is clear that Tang shows wherein the bit line contacts 132, the cell plugs 134, and the bit lines 152 are all formed within the dielectric layer 120. Because the bit lines 152, the bit line contacts 132, and the cell plugs 134 are all formed in the dielectric layer 120, Applicants respectfully submit that Tang cannot teach “a second insulating

film including a groove-shaped bit line pattern that exposes ... [a bit line contact pad of a first insulating film] and a storage node contact that exposes ... [a storage node contact pad of the first insulating film]" as recited in claim 17.

As also mentioned above, it is clear that Tang shows wherein the bit lines 152 are formed within the bit line contacts 132. As such, Applicants respectfully submit that Tang cannot teach "a bit line formed ... above the bit line contact pad" as recited in claim 17.

For at least the reasons stated above, Applicants respectfully submit that Tang does not anticipate claim 17 and, therefore, request allowance of this claim. Additionally, Applicants request allowance of claim 18 at least based upon its dependence from claim 17.

Further, while claim 18 was identified as being allegedly anticipated by Tang, the Office Action fails to identify where Tang teaches the subject matter of claim 18. Nevertheless, Applicants respectfully submit that Tang is silent as to the subject matter recited in claim 18. For at least these additional reasons, Applicants submit that Tang fails to anticipate claim 18 and requests allowance of this claim.

Claim 19 recites elements similar to those found in claim 17. Accordingly, remarks presented above with respect to the rejection of claim 17 are equally applicable with respect to the rejection of claim 19. For at least these reasons, Applicants submit that Tang fails to anticipate claim 19 and requests allowance of this claim.

Further, claim 19 recites "a first insulating film having a bit line contact pad and a storage node contact pad; ... a bit line ... above the bit line contact pad; [and] a contact plug ... above the storage node contact pad." Applicants respectfully submit that Tang fails to teach at least these elements as recited in claim 19.

For example, as mentioned above, it is clear that, aside from the bottom cell plate 180 (see Tang, FIG. 18), Tang only shows bit line contacts 132, cell plugs 134, and bit lines 152. As such, Tang cannot teach a bit line contact pad, a storage node contact pad, a bit line above the bit line contact pad, and a contact plug above the storage node contact pad, as each recited in claim 19.

For at least the additional reasons stated above, Applicants respectfully submit that Tang does not anticipate claim 19 and, therefore, request allowance of this claim. Additionally, Applicants request allowance of claim 20 at least based upon its dependence from claim 19.

Further, while claim 20 was identified as being allegedly anticipated by Tang, the Office Action fails to identify where Tang teaches the subject matter of claim 20. Nevertheless, Applicants respectfully submit that Tang is silent as to the subject matter recited in claim 20. For at least these additional reasons, Applicants submit that Tang fails to anticipate claim 20 and requests allowance of this claim.

Claim Rejections - 35 U.S.C. § 103

Claim 4 is rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Tang in view of U.S. Patent No. 6,383,863 issued to Chiang, et al. (hereinafter "Chiang"). Applicants respectfully traverse this rejection.

Claim 4 depends from claim 1 and, therefore, includes all of the elements recited in claim 1. As established above, Tung does not anticipate claim 1. Applicants respectfully submit that Chiang does not supply any teachings which, when combined with Tang, would render claim 1 obvious. Accordingly, Applicants respectfully submit that the combination of Tang in view of Chiang does not render claim 4 obvious and request allowance of this claim.

Allowable Subject Matter

Applicants appreciate the allowance of claims 6-16.

Further, Applicants note that claims 21-23 were indicated as containing allowable subject matter in the September 19, 2005 Office Action. The July 26, 2006 Office Action does not object to, or reject, claims 21-23. Applicants therefore interpret the status of these claims as being the same as the September 19, 2005 Office Action.

CONCLUSION

For the foregoing reasons, Applicants request reconsideration and allowance of claims 1-5 and 17-20 of the application. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

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